

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of

Andrei V. KOMKIN et al

Art Unit: 3764

Application No: 10/666,026

Examiner:  
Manuj Agarwal

Filed: September 17, 2003

For: APPARATUS AND METHOD FOR PASSIVE AND  
ACTIVE HAND AND FINGER EXERCISE

APPLICANTS' REMARKS IN REPLY TO  
OFFICE ACTION MAILED 01/12/2006

COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

Sir:

In response to the first Office Action from the USPTO in which the examiner rejects our original patent application, we (the applicants for a patent) would like to respond with the following.

We agree with the rejection of claims 8 and 12 under 35 U.S.C. 112 p. 1.

To address the issues pointed out by the patent examiner, we present the revised version of our patent application, which contains more details about the main effect (technical result) and the principle of the invention. As requested by the patent examiner, we believe that it now contains adequate written description of the invention.

The new version of the document does not extend beyond the claims described in the original patent application. It is based on the materials of the original version of the invention description. The new version does not contain any new claims.

We agree with the rejection of claims 3, 4, 15, 16, 24 under 35 U.S.C. 112, p.2. The new version of patent application is corrected.

We agree with the rejection of claims 20, 21, 24-26 under 35 U.S.C. 102 (e). The new document contains more details that provide clear explanation on the disposition of protrusions on the massaging element and the technical result that is achieved based on such disposition.

We do not agree that claims 1, 14 were rejected under 35 U.S.C. 103 (a) due to obviousness of the invention.

The obviousness criteria according to the patent examiner is based on combination of existing apparatus, namely a known massaging apparatus (USA patent 4,846,159) and a known apparatus for active-passive gymnastics by Dedyukhina.

We would like to provide arguments against the obviousness criteria described by the patent examiner and we claim that the existing apparatus quoted above do not achieve the goals and the technical effect that is achieved by the present invention.

A quote from the USA patent 4,846,159, column 4, paragraph 35-40, figure 4.

"As shown in Fig. 4, by holding the massage apparatus A in hand and moving it toward the direction of P-Q indicated by arrow to rotate the balls 3 while pressing them against the hand, leg, scruff of the neck, shoulder or abdomen of the user, or against another person's body, a multiple number of projections 5 of the rotating balls 3 come into contact with the skin and the effective spots and stimulate the same one by one, thereby achieving agreeable finger pressure effect."

The "agreeable finger pressure effect" of Anzai apparatus is achieved by combination of all claims of the invention, including "retaining the balls in a rotatable state by rotatably supporting a pair of projections of the balls and in attachable/detachable manner".

The technical result of the present invention according to the goal of the invention is stimulation of involuntary-reflectory (i.e. passive-active, as stated in the original patent specification) movements of extremity. This technical result can not be obvious,

because it is unknown based on the apparatus by Dedyukhina and the apparatus by Anzai.

The massaging elements of Anzai apparatus are stationary - they are retained in the same position inside the container, not freely located inside the container, therefore they can not serve as stimulators of involuntary-reflectory movements.

The combination of all claims of the present invention (see claims 1, 9 of the revised version) and the method of its employment produce a different functional effect of the massaging elements with protrusions (as compared with Anzai apparatus).

In present invention, they serve to stimulate sensory neuron receptors of different modality with the goal of inducing involuntary-reflectory movements of extremities (see 0021, page 8 of the original patent specification, stating "the massaging protrusions stimulate the nerve receptors", which causes involuntary movements).

To achieve the above functional goal, the massaging elements with protrusions need to have a number of additional requirements. One such requirement is that the spherical massaging elements need to be freely disposed in a container with internal cavity and an inlet providing for access inside and the quantity of the massaging elements need to be sufficient for providing contact of extremity placed inside the container with the projections of several massaging elements during movement inside the container.

The combination of all the claims of the present invention (see the revised version) and the method of its employment (extremity is moved inside the container) makes the projections on the surface of massaging elements to be the stimulators of extremity sensory neuron endings of different modality capable of causing involuntary-reflectory movements of extremities during therapy exercise.

This functional goal of the massaging elements is achieved by the complete combination of the way the apparatus is constructed and the peculiarities of its employment. The invention produces a new therapeutic effect instead of

increasing/enhancing the therapeutic effect of the existing apparatus (USA patent 4,846,159 and apparatus by Dedyukhina).

Since the goal of the present invention is stimulation of involuntary-reflectory movements of extremities, the spherical massaging elements with projections are placed inside the container with the different goal compared to the apparatus by Dedyukhina, which aims at massage and acupuncture.

The massaging elements of the present invention are stimulators that inevitably contact patient's extremity when it is moved inside the container. They realize a different operation principle and a different method of therapy.

We, the inventors, would like to emphasize that the apparatus for involuntary-reflectory gymnastics described in the present invention operates based on the principles entirely different that those of the existing apparatus. And, of course, the technical result of its operation is different.

According to the method of their employment during therapy and the character of their effect on human body, the spherical massaging elements with projections may be used to achieve entirely different goals:

- Anzai apparatus uses them to achieve acupuncture effect
- The present invention uses them to stimulate the involuntary motion reflexes, such as jerking back the extremities.

The main principle of operation of the present invention is creating obstacles for movements of extremity inside the container, which an extremity gets in contact with while trying to move. The role of such obstacles is played by the spherical bodies with projections.

With this principle of operation and method of usage the involuntary-reflectory movements of extremities (jerking back) occur, because the extremity runs into the protrusions of the massaging elements causing the stimulation of the extremity sensory neuron endings (see 0021, page 8 of the original patent specification).

The construction and method of usage of Anzai apparatus is such that the spherical massaging elements can not function as stimulators of the extremity sensory neuron endings in a way that is capable of producing the reflectory response (involuntary motion reaction of extremity).

This effect is not mentioned in the patent description (USA patent 4,846,159), because it is simply not intended according to the method of operation of this massaging apparatus.

If kidney beans in apparatus of Dedyukhina are replaced with spherical massaging bodies with projections, and if such spherical massaging bodies are placed inside the container in a quantity that is sufficient for producing contact of extremity with several projections while the extremity is moved inside the container, the new effect that is achieved will not be the enhancement of the known therapeutic effects (soft massage by the contact with kidney beans and acupressure massage, known from Anzai patent), but a principally new therapeutic effect (as stated in the original patent specification).

Again, the replacement of kidney beans with spherical bodies with projections creates a new therapeutic effect, not the modification of the existing therapeutic effects (adding acupuncture to soft massage of extremity).

The apparatus and method presented in this invention realize principally new direction in rehabilitation medicine - a new method of therapy gymnastics.

Previous claims 3, 4, 7, 8, 9, 10, 11, 12, 13, 15, 16, 17, 18 are now excluded from the revised version in accordance with the issues pointed out by the patent examiner.

We do not agree with the conclusion of the patent examiner that claim 19 should be rejected under 35 U.S.C 103 (a).

The construction of apparatus of Dedyukhina excludes a therapy that can be conducted in liquid environment. It is obvious that kidney beans will quickly swell in water and lose their original shape.

Therefore, such massaging elements will not properly function as intended.

Apparatus and method of Staffin (U.S. Patent 3,760,800) employs not a liquid but a special substance consisting of hard particles, which under certain conditions becomes similar to liquid (a pseudo-liquid layer is created). Such therapy can not be called hydrotherapy, because a real liquid is not being employed.

Therefore, it is our opinion that based on the arguments provided above it is not possible to make a conclusion about the obviousness of the second technical result (effect) of the present invention - conducting involuntary-reflectory gymnastics in a liquid environment.

Previous claims 22, 23, 24, 26, 27, 28 are now excluded from the revised version of the patent application according to the issues raised by the patent examiner.

Respectfully submitted,

/Andrei V. Komkin/

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Andrei V. Komkin

/Alexander S. Pervov/

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Alexander S. Pervov